

### **REMARKS**

This paper is responsive to the Office Action mailed February 13, 2006. Filed herewith is a Request for a One Month Extension of Time, which extends the statutory period for response to expire on June 13, 2006. Accordingly, Applicant respectfully submits that this response is being timely filed.

Claims 1-13, 15, 16, 18 and 19 are pending in this application. Claims 14, 17, and 20 have been previously cancelled.

#### **Double Patenting**

At ¶4 of the Office Action, the Examiner rejects claims 1 and 10 under obviousness-type double patenting as being unpatentable over claims 1 and 17 of co-pending application number 09/827,971. Accordingly, a terminal disclaimer is submitted herewith to overcome these rejections, so these rejections should be withdrawn.

#### **Claim Rejections**

At ¶9 of the Office Action, Applicant is encouraged to note that the Examiner has withdrawn the objection of obviousness over Aho in view of Davidson, which was raised previously. However, the Examiner now rejects claims 1, 2, 4-7, 10, 12, 13, 18 and 19 under 35 U.S.C. §102(b) as being anticipated by US Patent No. 5,613,117 (Davidson). The Applicant traverses these rejections for at least the following reasons.

The Applicant believes the Examiner's analysis on pages 6 and 7 of the Office Action clearly shows that Davidson does not anticipate independent claim 1. As cited by the Examiner, column 3, lines 14-20 of Davidson teaches that the front end scans and parses the source code modules and generates from them an intermediate language representation. At column 2, lines 39-44, Davidson states, "up to this point, data references were to variables and constant by name

or in the abstract without regard to where stored” (emphasis added). Clearly, in generating the intermediate representation, Davidson has no regard to where the variables and constants referred to in the source code are stored. In generating the intermediate representation, Davidson does not “generate a plurality of register objects holding variable values...” as claim 1 requires.

The back end of the compiler of Davidson is responsible for register allocation. The back end of Davidson is where the tuples are allocated to registers of the target processor where the output executable image will run on the target computer 25.

This is exactly the same argument the Applicant presented in reply to the second Office Action in relation to Aho. One only needs to look over chapter 9 of Aho concerning “register allocation” in a compiler in order to properly make sense of Davidson and more clearly understand this distinction.

Secondly, Davidson fails to teach representing “one variable sized register” by “plural register objects, one register object being provided for each possible size of the variably sized register.” Claim 1 concerns a method for generating an intermediate representation of program code where that program code is written for running on a programmable machine. That is, the program code for which the intermediate representation is being generated is usually called the “subject code” and, as stated in the preamble of claim 1, this subject code is written for running on a programmable machine (the subject machine). In claim 1, at least one variable sized register (i.e., of the subject machine) is represented [in the intermediate representation generated by the method of claim 1] by plural register objects, one register object being provided for each possible size of the variable sized register of the subject machine. Concerning this feature, the Examiner cites Davidson at column 72, lines 22-25. As we discussed previously, column 72 of Davidson is an annex concerning TN allocation and life time actions” which are performed by the back end 12 of the compiler. Column 72 of Davidson concerns code generation in the back end 12 of the compiler and is irrelevant to “a method of generating intermediate representation” as in claim 1, which instead occurs in the front end of the compiler in Davidson. Again, the Applicant stresses that the claimed method concerns generating intermediate representation and

is not concerned with downstream actions such as register allocation, which occur after the intermediate representation has been generated.

Further, the “TN allocation” function of Davidson is in no way equivalent to generating (in the intermediate representation) plural register objects to represent a variable sized register of the subject machine (i.e., a register which may be accessed in different widths - as in the example Motorola 68000 processor architecture mentioned at paragraph [0127] etc of the present application). Davidson does not at any point mention “variable sized registers.” The function “ALLOCATE\_PERMANENT(operand,size)” discussed at col. 72, lines 22-29 is in the back end of the compiler of Davidson and allocates a permanent class temporary name (TN) of size “bytes” to the specified “operand” variable. More detailed discussion of the allocation of temporary names in the back end 12 of the compiler of Davidson is found at col. 25, line 12 to col. 27, line 5 and refers to the Appendix including the referenced col. 72. That is, Davidson clearly teaches that the “TN Allocation” function is in no way concerned with variable sized registers (of the subject machine) as claimed.

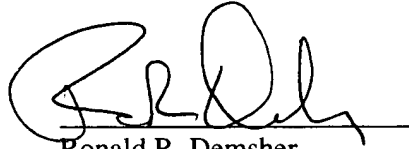
This misconception concerning “register allocation” in Davidson persists throughout the Examiner’s analysis of the claims. Hence, the Applicant believes the argument above applies equally to the remaining independent claims, and further maintains the arguments in favor of those claims as presented previously.

In view of the above remarks, applicant believes the pending application is in condition for allowance. No fees are believed to be due in connection with the filing of this response, however the Commissioner is authorized to debit Deposit Account No. 08-0219 for any required fee necessary to maintain the pendency of this application.

Should the Examiner still not feel able to issue a Notice of Allowance, we request a personal interview with the Examiner in order to expediently resolve, among others, the issue of "register allocation" compared with "generating intermediate representation." To arrange such an interview, please telephone the undersigned Attorney.

Respectfully submitted,

Dated: June 13, 2006

A handwritten signature in black ink, appearing to read 'R. Demsher', is written over a horizontal line.

Ronald R. Demsher  
Registration No.: 42,478  
Attorney for Applicant(s)

Wilmer Cutler Pickering Hale and Dorr LLP  
60 State Street  
Boston, Massachusetts 02109  
(617) 526-6000 (telephone)  
(617) 526-5000 (facsimile)